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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,568	09/05/2003	Stephen L. Spear	CS23169RA	7858

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EXAMINER	
FOUD, HICHAM B	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/656,568	SPEAR ET AL.	
	Examiner	Art Unit	
	Hicham B. Foud	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/05/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

In page 4 lines 11 and 13, the element 210 has to be changed to element number 220, because the element 210 is defined as the base station and the element 220 is the wireless device (see Figure 2).

In page 11 line 10, Fig. 8 has to be changed to Fig. 9, because the 8.5 guard time bits are defined in Figure 9 not in Figure 8.

Appropriate correction is required.

Claim Objections

2. Claims 5, 8, 9 and 22 are objected to because of the following informalities:

In claim 5 line 8, the term "by" needs to be changed by "on".

In claim 8 line 21, one of the terms "at" and "in" in the recitation "the timing advance at in the wireless communications device" needs to be removed. Similar problem occurs in claim 9.

In claim 22 line 8, the article "a" has to be removed.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 18 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 18 line 7, the term "the source" has no antecedent basis.

Claim 19 is rejected because it depends on the rejected claim.

Claim Rejections - 35 USC § 103

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nam (GB 2383215 A) in view of Carlsson et al (6,603,978), hereinafter referred to as Carlsson.

For claim 1, Nam discloses a method in a wireless communications device, the method comprising: determining a distance of the wireless communications device from a base station (see Figure 4, box 68; wherein the distance from terminal to base station is calculated); using the timing advance determined for transmitting to the base station (see page 11 lines 1-4; the mobile terminal receives the TA (Timing Advance) signal and advances its transmission timing to correctly synchronize its transmission; inherently, uses the timing advance for transmitting to the base station).

Nam discloses all the subject matter with the exception of determining timing advance, at the wireless communications device, for the base station based on the distance of the wireless communications device from the base station. However, Carlsson teaches that mobile terminal can determine its current location based on GPS signals transmitted by a GPS satellite (see column 4 lines 49-51). Moreover, the base stations may have a GPS unit for the same reason (see Figure 1, element 22 attached to base station and see column 4 lines 23-25). While Nam is determining the distance of the wireless communication device from the base station based on the timing advance, it does not do the opposite, which is determining the timing advance based on the distance of the wireless communications device from the base station. A person of ordinary skill in the art would recognize a need of doing the opposite of Nam's system since the timing advance is proportional to the distance of the wireless communications device from the base station. Thus, it would have been obvious to the person of ordinary skill in the art at the invention to implement the GPS signals of the invention of Carlsson in the system

of Nam to determine the location of the wireless communications device and the base station and transmit the timing advance based on their locations.

For claim 2, Nam discloses, determining a location of the wireless communications device (see Figure 4, box 72; geographical location), determining the distance of the wireless communications device from the base station using the location of the wireless communications device and a location of the base station (see Figure 4, box 68; wherein the distance from terminal to base station is calculated).

For claim 3, Carlsson discloses, the wireless communications device includes a satellite positioning system receiver (see Figure 2 element 130; 130 is the GPS receiver in the mobile terminal 100), determining the location of the wireless communications device by obtaining a satellite positioning system based location fix (see column 4 lines 50-52).

For claim 4, Nam discloses a method, obtaining the location of the base station (see Figure 4, box 72; geographical location) based on known timing advance information for different locations with a cell served by the base station (see page 11 lines 1-4; the mobile terminal receives the TA (Timing Advance) signal and see Figure 1; wherein the mobile terminal can be in different locations of cell 12).

For claim 5, Nam discloses a method, obtaining the location of the base station based by receiving a message including base station location information (see page 16 lines 7-10; wherein the location of the base station is transmitted as a message).

For claim 6, Nam discloses a method, obtaining the location of the base station from a table of base station locations stored on the wireless communications device (see page 15 lines 21-23; wherein the table of base station locations includes at least the three base stations contacted).

For claim 7, Nam discloses a method, obtaining the base station locations stored in the table by downloading to the wireless communications device (see page 15 lines 21-23; wherein the table of base station locations includes at least the three base stations contacted and see page 16 lines 2-10; wherein the location of the base station is transmitted as a message; inherently, the table is downloaded to the wireless communications device upon receiving that message).

For claim 8, Nam discloses a method, determining the timing advance at in the wireless communications device for transmitting voice over a packet network (see Page 8 lines 8-9, the present invention is applicable to GSM and UMTS; inherently, those networks support voice over packet).

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nam in view of Carlsson, and in further in view of the background of the invention of Bontempi (2002/0150092) et al hereinafter referred to as bontempi.

For claim 9, Nam and Carlsson disclose all the subject matter with the exception of determining the timing advance at in the wireless communications device during a push-to-talk session over a packet network. However the background of the invention of Bontempi teaches the voice of Internet protocol (VoIP) in any telecommunication

system and the use of the push-to-talk system, which is a call Group communication that allows active users in the specific subscriber group to communicate using "push-to-talk, release-to-listen" feature (see page 1 paragraph 0008). Thus, it would have been obvious to the person of ordinary skill in the art at the invention to use the push-to-talk system as taught by the background of the invention of Bontempi in the communication network of Nam and Carlsson to determine the timing advance during the push-to-talk session. The motivation of using the push-to-talk communication being that is a short call setup time and makes the push-to-talk type of speech calls attractive to several other types of users.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Scott (US 6,388,997).

For claim 10, Scott discloses a method in a wireless communications device, the method comprising: determining a propagation delay between the wireless communications device and a base station (see column 10 lines 35-36); determining timing advance, in the wireless communications device, for the base station based on the propagation delay between the wireless communications device and the base

station (see column 10 lines 39-40); using the timing advance determined for transmitting to the base station (see column 10 lines 40-42).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scott in view of Carlsson.

For claim 11, Scott discloses all the subject matter with the exception of obtaining satellite positioning system time from a satellite positioning system, obtaining satellite positioning system time from the base station, determining propagation delay using the satellite positioning system time from the satellite positioning system and the satellite positioning system time from the base station. However, Carlsson discloses a method wherein, obtaining satellite positioning system time from a satellite positioning system (see Figure 1 element 24), obtaining satellite positioning system time from the base station (see Figure 1, element 22 attached to base station and see column 4 lines 23-25).). While Carlsson uses the GPS to obtain satellite positioning system time, it does not determine the propagation delay using the satellite positioning system time from the satellite positioning system and the satellite positioning system time from the base

station . A person of ordinary skill in the art would recognize a need of using the satellite positioning system time from the satellite positioning system and from the base station to determine the propagation delay. Thus, it would have been obvious to the person of ordinary skill in the art at the invention to implement the GPS signals of the invention of Carlsson in the system of Scott to determine the propagation delay. The motivation of using the GPS (positioning system) is being that it transmits signals allowing GPS receivers to determine the receiver's location, speed and direction.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 12-17 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al (US 2003/0139188), hereinafter referred to as Chen.

For claim 12, Chen discloses a method in a wireless communications device, the method comprising: obtaining first timing information for the wireless communications device at a first known location relative to a base station (see Figure 3, d(TA_lo)); obtaining second timing information for the wireless communications device at a second known location relative to the base station (see Figure 3, d(TA_up)); determining a

location of the base station based on the first and second timing information and based on the first and second known locations (see page 2 paragraph 0025 lines 17-21).

For claim 13, Chen discloses a method in wireless communications device, the method comprising: determining a difference between a current cell timing and a prior cell timing for a common serving cell (see Figure 3, wherein TA_up is current cell timing and TA_low is a prior cell timing and the difference is the TA of MS 22); determining a current timing advance for the common serving cell using the difference between the current cell timing and the prior cell timing and using a prior timing advance corresponding to the prior cell timing (see page 2 paragraph 0025 lines 16-17; base station determines a TA value for MS22).

For claim 14, Chen discloses a method using the current timing advance for communicating with the network (see page 2 paragraph 0024 lines 7-10; the use of the TA value to reposition the uplink burst; inherently, using the TA to communicate with the network), determining the current timing advance before communicating with the network (see page 2 paragraph 0024 lines 6-10; the TA is calculated before using it).

For claim 15, Chen discloses a method in a wireless communications device having a look-up table providing timing advance information associated with different locations relative to at least one base station (see Figure 3, TA_lo and TA_up which are two different timing advances associated with different locations and see page 2 paragraph 0024 lines 6-7; the TA is sent to MS 22; inherently, MS 22 has the TA's which are considered as a look-up table), the method comprising: determining a location of the wireless communications device (see page 2 paragraph 0025 lines 17-21) ;

determining timing advance information for the location of the wireless communication device from the look-up table (see page 2 paragraph 0025 lines 16-17; base station determines a TA value for MS22 using TA_lo and TA_up).

For claim 16, Chen discloses a method, determining timing advance information for the location of the wireless communication device using timing advance information in the look-up table only if the location of the wireless communications device is within a specified distance of a location in the look-up table for which timing advance information is provided (see page 2 paragraph 0025 lines 16-17; base station determines a TA value for MS 22 using TA_lo and TA_up and see Figure 3 wherein the location of MS 22 is within a specified distance of d(TA_lo0 and d(A_up)).

For claim 17, Chen discloses a method, obtaining timing advance information from a source other than the look-up table if the location of the wireless communications device is not within a specified distance of a location in the look-up table for which timing advance information is provided (see page 2 paragraph 0025 lines 16-17; base station is the source that determines a TA value for MS 22 using TA_lo and TA_up and see Figure 3 wherein the location of MS 22 is not within a specified distance of the base station).

For claim 20, Chen discloses a method in a wireless communications device, the method comprising: determining timing advance on the wireless communications device (see page 2 paragraph 0024 lines 6-7); transmitting a modified burst to a network using

the timing advance determined on the wireless communications device (see page 2 paragraph 0024 lines 7-10;transmitting a burst at a time corresponding to the TA value).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Scott.

For claims 21 and 22, Chen discloses all the subject matter with the exception of transmitting a modified access burst having a reduced guard time relative to an un-modified access burst and transmitting a modified normal burst having an increased guard time relative to an un-modified normal access burst, without first transmitting an access burst. However, Scott teaches that the increase or the decrease of the guard time is relative to the propagation delay time and can be expressed by a number of bits or chips and resulting the advancing or retarding the timing by the number of bits or chips specified (see column 11 line 62 to column 12 line 14). Thus, it would have been obvious to the person of ordinary skill in the art at the invention to use the increase / decrease of the guard time to prevent the interference.

9. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Johnson (US 5,839,071).

For claim 23, Chen discloses all the subject matter with the exception of receiving a timing advance correction from the network after sending the modified burst to the network. However, Johnson teaches that a base station provides a timing advance TA number that indicates the number of bits in advance, which the mobile station should transmit its bursts. Moreover, the corrected TA will be determined at the call setup and will be provided to the mobile station (see column 9 lines 54-67). Thus, it would have been obvious to the person of ordinary skill in the art at the invention to use the method of Johnson in the communication of Chen to prevent the delay, which occurs when the mobile station is very close to the base station.

Allowable Subject Matter

10. Claims 18 and 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hicham B. Foud whose telephone number is 571-270-1463. The examiner can normally be reached on Monday - Thursday 10-3 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HF

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